



COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS
DEPARTMENT OF ENVIRONMENTAL PROTECTION
ONE WINTER STREET, BOSTON, MA 02108 617-292-5500

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Commissioner

RENEWAL OF CERTIFICATION FOR GENERAL USE
Pursuant to Title 5, 310 CMR 15.000

Name and Address of Applicant:

Innovative RUCK Systems, Inc.
200 Main Street
Falmouth, MA 02540

Trade name of technology and model number: RUCK System for residential facilities with a design flow of less than 2000 gallons per day (hereinafter the "System").

Transmittal Number: 97894
Date of Issuance: April 25, 2000
Expiration date: April 25, 2005

Authority for Issuance

Pursuant to Title 5 of the State Environmental Code, 310 CMR 15.000, the Department of Environmental Protection hereby issues this Certification for General Use to: Innovative RUCK Systems, Inc., 200 Main Street, Falmouth, MA 02540 (hereinafter "the Company"), certifying for General Use in the Commonwealth of Massachusetts of the System described herein. Sale and use of the System are conditioned on and subject to compliance by the Company and the System owner with the terms and conditions set forth below. Any noncompliance with the terms or conditions of this Certification constitutes a violation of 310 CMR 15.000.

Glenn Haas, Director
Division of Watershed Management
Department of Environmental Protection

Date

This information is available in alternate format by calling our ADA Coordinator at (617) 574-6872.

DEP on the World Wide Web: <http://www.state.ma.us/dep>

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Ruck Renewal of General Use Certification

I. Purpose

1. The purpose of this Certification is to allow the use of the System in Massachusetts on a General Use basis.
2. With the necessary permits and approvals required by 310 CMR 15.000, this Certification authorizes the installation and use of the System in Massachusetts.
3. The System may be installed on all facilities where a system in compliance with 310 CMR 15.000 exists on site or could be built and for which a site evaluation in compliance with 310 CMR 15.000 has been approved by the local approving authority; or by DEP if DEP approval is required by 310 CMR 15.000.

II. Design Standards

1. The System shall be installed in a manner which does not adversely affect the operation of a Title 5 system as constructed in accordance with 310 CMR 15.100 through 15.279, subject to the provisions of this Certification.
2. The System consists of two septic tanks; one tank is piped to the greywater system, the second tank is piped to the blackwater system. The greywater system discharges to a standard soil absorption system (SAS). The blackwater system discharges to a RUCK sand filter, consisting of alternative layers of sand and plastic drains constructed within an impermeable liner. Effluent from the sand filter is collected and piped to the greywater septic tank for mixing prior to discharging to the SAS.
3. New Construction: In accordance with 310 CMR 15.217(2), an increase in calculated nitrogen loading per acre is allowed for residential facilities *with a design flow of less than 2000 gpd*, with the use of the System in areas subject to nitrogen loading limitations, under 310 CMR 15.214. When used in such areas:
 - i. the design flow shall not exceed **660** gallons per day of design flow per acre (gpda) and the total nitrogen (TN) concentration in the effluent shall not exceed 19 milligrams per liter (mg/L), or
 - ii. the design flow shall not exceed **550** gallons per day of design flow per acre (gpda) and the total nitrogen (TN) concentration in the effluent shall not exceed 25 milligrams per liter (mg/L).

III. General Conditions

1. The provisions of 310 CMR 15.000 are applicable to the use of this System, except those that specifically have been varied by the terms of this Certification.
2. Any required operation and maintenance, monitoring and testing shall be performed in accordance with a Department approved plan. Any required sample analysis shall be conducted by an independent U.S. EPA or DEP approved testing laboratory, or a DEP approved independent university laboratory, unless otherwise provided in the Department's written approval. It shall be a violation of

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this Certification to falsify any data collected pursuant to an approved testing plan, to omit any required data or to fail to submit any report required by such plan.

3. The facility served by the System and the System itself, shall be open to inspection and sampling by the Department and the local approving authority at all reasonable times.
4. In accordance with applicable law, the Department and the local approving authority may require the owner of the System to cease operation of the system and/or to take any other action as it deems necessary to protect public health, safety, welfare or the environment.
5. The Department has not determined that the performance of the System will provide a level of protection to public health and safety and the environment that is at least equivalent to that of a sewer. Accordingly, no System shall be upgraded or expanded, if it is feasible to connect the facility to a sanitary sewer, unless as allowed by 310 CMR 15.004.
6. Design and installation and use of the System shall be in strict conformance with the Company's DEP approved plans and specifications and 310 CMR 15.000, subject to this Certification.

IV. Conditions Applicable to the System Owner

1. The System is certified in connection with the discharge of sanitary wastewater only. Any non-sanitary wastewater generated and/or used at the facility served by the System shall not be introduced into the System and shall be lawfully disposed of.
2. Operation and Maintenance agreement:
 - i. Throughout its life, the System shall be under an operation and maintenance (O&M) agreement. No O&M agreement shall be for less than one year.
 - ii. No System shall be used until an O&M agreement is submitted to the local approving authority which:
 - provides for the contracting of a person or firm competent in providing services consistent with the System's specifications and the operation and maintenance requirements specified by the designer and any specified by the Department;
 - contains procedures for notification to the Department and the local board of health within five days of a System failure or alarm event and for corrective measures to be taken immediately;

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- contains a plan to determine the cause of effluent limit violations for total nitrogen if violations occur on two consecutive sampling events;
 - provides the name of an operator, which must be a Massachusetts certified operator if one is required by 257 CMR 2.00, that will operate and monitor the System. The operator must operate and maintain the System at least every three months and anytime there is an alarm event.
3. The owner of the System shall at all times have the System properly operated and maintained in accordance with the Company's and the designer's operation and maintenance requirements and this Certification.
 4. The owner of the System shall provide a copy of this Certification, prior to the signing of a purchase and sale agreement for the facility served by the System or any portion thereof, to the proposed new owner.
 5. The owner shall furnish the Department any information that the Department requests regarding the System, within 21 days of the date of receipt of that request.
 6. In areas subject to the nitrogen load limitations in 310 CMR 15.214:
 - i. For year round residential use, effluent from the System shall be monitored quarterly. The following parameters shall be monitored: pH, biochemical oxygen demand (BOD₅), total suspended solids (TSS), TN. Each time the System is monitored, the water meter reading also shall be recorded. All monitoring data shall be submitted to the Department within 30 days of the sampling date. After one year of monitoring and at the written request of the owner, the Department may reduce the monitoring requirements.
 - ii. For seasonal residential use where the residence is occupied fewer than six months per year, effluent from the System shall be monitored twice per season; initially 45 days after occupancy and a second time within two weeks prior to System shut down. The following parameters shall be monitored: pH, BOD₅, TSS, TN. Each time the System is monitored, the water meter reading also shall be recorded. All monitoring data shall be submitted to the Department within 30 days of the sampling date. After two seasons of monitoring and at the written request of the owner, the Department may reduce the monitoring requirements.

V. Conditions Applicable to the Company

1. By January 31st of each year, the Company shall submit to the Department, a report, signed by a corporate officer, general partner or Company owner that contains information on the System for the previous calendar year. The report shall state: the number of units of the System sold for use in Massachusetts during the previous year; the address of each installed System, the owner's name and

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address, the type of residential use and the design flow; and for all Systems installed since the first issuance of Certification for the System, all known failures, malfunctions, and corrective actions taken and the address of each such event.

2. The Company shall notify the Director of the Watershed Permitting Program at least 30 days in advance of the proposed transfer of ownership of the technology for which this Certification is issued. Said notification shall include the name and address of the proposed new owner and a written agreement between the existing and proposed new owner containing a specific date for transfer of ownership, responsibility, coverage and liability between them. All provisions of this Certification applicable to the Company shall be applicable to successors and assigns of the Company, unless the Department determines otherwise.
3. The Company shall furnish the Department any information that the Department requests regarding the System, within 21 days of the date of receipt of that request.
4. Prior to its sale of the System, the Company shall provide the purchaser with a copy of this Certification. In any contract for distribution or sale of the System, the Company shall require the distributor or seller to provide the purchaser of the System, prior to any sale of the System, with a copy of this Certification.
5. If the Company wishes to continue this Certification after its expiration date, the Company shall apply for and obtain a renewal of this Certification. The Company shall submit a renewal application at least 180 days before the expiration date of this Certification, unless written permission for a later date has been granted in writing by the Department.

VI. Reporting

1. All notices and documents required to be submitted to the Department by this Certification shall be submitted to:

Director
Watershed Permitting Program
Department of Environmental Protection
One Winter Street - 6th floor
Boston, Massachusetts 02108

VII. Rights of the Department

1. The Department may suspend, modify or revoke this Certification for cause, including, but not limited to, non-compliance with the terms of this Certification, non-payment of the annual compliance assurance fee, for obtaining the Certification by misrepresentation or failure to disclose fully all relevant facts or any change in or discovery of conditions that would constitute grounds for discontinuance of the Certification, or as necessary for the protection of public health, safety, welfare or the environment, and as authorized by applicable law. The Department reserves its rights to take any enforcement action authorized by

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law with respect to this Certification and/or the System against the owner or operator of the System and/or the Company.

VIII. Expiration date

1. Notwithstanding the expiration date of this Certification, any System sold and installed prior to the expiration date of this Certification, and approved, installed and maintained in compliance with this Certification (as it may be modified) and 310 CMR 15.000, may remain in use unless the Department, the local approval authority, or a court requires the System to be modified or removed, or requires discharges to the System to cease.

General Approval RUCK -97894r